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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/554,018

01/23/2007

Edwin S. Olson

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EXAMINER

JOHNSON, EDWARD M

ART UNIT

PAPER NUMBER

1793

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DELIVERY MODE

10/06/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/554,018	<b>Applicant(s)</b> OLSON ET AL.	
	<b>Examiner</b> Edward M. Johnson	<b>Art Unit</b> 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 August 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-69 is/are pending in the application.
- 4a) Of the above claim(s) 62-69 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-61 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Election/Restrictions***

Applicant's election without traverse of Group I, claims 1-61, in the reply filed on 8/10/09 is acknowledged.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1-61 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Pahlman et al. US 6,579,507.**

Regarding claims 1, 21, 27, 37, 43, and 56, Pahlman discloses a method for regenerating a sorbent comprising removing used sorbent in a multi-staged manner, exposing to a dilute acid solution, and recovering the regenerated sorbent by removing the solution and drying (column 16, lines 25-44).

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Regarding claims 2-14, 22-25, 32-35, 38-41, 48-54, and 58-61, Pahlman discloses acid solution (abstract).

Regarding claims 17-20, Pahlman discloses mixing with the acid, and water (claim 77).

Regarding claims 15-16, 26, 28-31, 36, 42, 44-47, 55, and 57, Pahlman discloses activated carbon, alumina, and injecting sorbent into the gas stream (columns 2-3).

Claims 43-48 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Leppin et al. US 6,475,451.

Regarding claim 43, Leppin discloses a method for regenerating sorbent comprising injecting sorbent into a gas stream, removing in stages, and exposing to an acid solution (abstract).

Regarding claims 44-48, Leppin discloses a sorbent bed, and acid solution (abstract, columns 7-8).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the

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art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

**Claims 7-10, 15-16, 23-25, 33-35, 39-41, 49-51, and 59-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pahlman as applied to the claims they depend from above, and further in view of Johnson et al. US 5,480,619.**

Regarding claims 7-10, 15-16, 23-25, 33-35, 39-41, 49-51, and 59-61, if Pahlman is construed as not specifically disclosing the claimed organic and inorganic acid, then Johnson discloses inorganic acids (abstract, col. 4, lines 30-35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the acids of Johnson in the sorbent regeneration method of Pahlman because Johnson discloses the acids for use in a regeneration device for sorbent used in flue gas (abstract).

**Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pahlman as applied to claim 3 above, and further in view of deJong et al. US 4,196,173.**

Regarding claims 4-6, if Pahlman is construed as not specifically disclosing the claimed inorganic acids, deJong discloses inorganic acids including HCl (Examples).

It would have been obvious to one of ordinary skill in the art to use the inorganic acid of deJong in the sorbent

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regeneration method of Pahlman because deJong discloses the acid for use in regenerating sorbent used in flue gas (Example).

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kulprathipanja US 6,342,462 discloses a method for regenerating a sorbent comprising stripping metal deposits including mercury by acid (see abstract, Example).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward M. Johnson whose telephone number is 571-272-1352. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Edward M. Johnson/  
Primary Examiner  
Art Unit 1793

EMJ